SEMUSHIN, A.D., red.; VIKULINA, E.K., red.; KOSAREVA, Ye.N., tekhn. red.

[Teaching mathematics in eight-year schools] O prepodavanii matematiki v vos'miletnei shkole. Pod red. A.D.Semushina. Moskva, Izd-vo Akad. pedagog.nauk RSFSR, 1961. 175 p. (MIRA 15:7)

1. Akademiya podagogicheskikh nauk RSFSR, Moscow. Institut obshchego i politekhnicheskogo obrazovaniya.
(Mathematics—Study and teaching)

KUZIN, I.A.; SEMUSHIN, A.M.

Apparatus for the continuous recording of the electric conductivity of flowing liquids. Trudy LTI no.48:204-208 '58. (MIRA 15:4)
(Liquids--Electric properties)

SOV/81-59-15-52582

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 15, p 40 (USSR)

AUTHORS: Kuzin, I.A., Semushin, A.M.

TITLE: The Application of the Ion Exchange Method for Separating Isotopes

PERIODICAL: Tr. Leningr. tekhnol. in-ta im. Lensoveta, 1958, Nr 48, pp 209-218

ABSTRACT: A review of works on the separation of the isotopes of Li, Na, K, Ca, N, Cl and Ti by the method of ion exchange chromatography. There are 22 references.

V. Lyubimov

Card 1/1

5.4500,5.5700

75662
SOV/80-32-10-11/51

AUTHORS: Semushin, A. M., Kuzin, I. A.

TITLE: Effect of γ-Radiation on the Physical-Chemical Properties of Certain Cation Exchange Resins

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol. 32, Nr 10, pp 2193-2197 (USSR)

ABSTRACT: This is a study of the effect γ-radiation has on the pH-capacity relation, swelling, and weight-losses of the sulfonate resins KU-1, KU-2, SBS-1, and the carboxylic resins KFU (phenoxyacetic acid-formaldehyde based), KMT and KB-4P-2 (methacrylic acid based). The hydrogen forms of the resins were irradiated in water at 78 to 200 roentgen/sec from a Co^{60} source of activity 1400 g-eq Ra; maximum integral dose 1.38×10^8 roentgen. The properties were determined after resin separation from the solution and from resin-decomposition products. The net capacity drop was considered

Card 1/3

the result of two factors: resin dissolution and functional-group decomposition. The sulfonate resins were more stable to γ-radiation than the carboxylic resins; at 6.7×10^7 roentgen, the capacity of KU-1 and SBS-1 remained unchanged, that of KU-2-8 and KU-2-24 decreased slightly, and that of KFU, KMT, and KB-4P-2 decreased by 4, 7, and 19%, respectively. Study of swelling increases in water and NaOH indicates polymer chain breakup in all the resins. The higher stability of KU-1, SBS-1, KU-2, and KFU is due to the ability of the aromatic rings in their structures to absorb radiation energy without decomposing. The divinylbenzene content of KU-2 affected solubility, but had little influence on the capacity drop per gram of bone-dry resin. Comparison with literature data shows that high γ-stability does not necessarily imply high chemical and thermal stability: KU-1 is highly radiation-stable but less chemically and thermally stable than KU-2 and SBS-1; while KU-2 with 8 to 10% divinylbenzene is stable in all

Effect of γ-Radiation on the Physical-Chemical Properties of Certain Cation Exchange Resins

75662
SOV/80-32-10-11/51

three respects. There are 2 tables; 3 figures; and 11 references, 2 U.S., 1 Japanese, 8 Soviet. The U.S. references are: Tompkins, E., Khym, J., Cohn, W., J. Am. Chem. Soc., 69, 2769 (1947); and Parker, G., Higgins, J., Roberts, J., Ion-Exchange Technology, N. Y., 442 (1956).

ASSOCIATION: Leningrad Institute of Technology imeni Lensovet (Leningradskiy tekhnologicheskiy institut imeni Lensoveta)

SUBMITTED: January 29, 1959

Card 3/3

53831
54600

25068
S/080/60/033/010/021/029
D216/D306

AUTHORS: Semushin, A.M., and Kuzin, I.A.

TITLE: Radiation-chemical stability of resin KU-2 in different ionic forms

PERIODICAL: Zhurnal prikladnoy khimii, v. 33, no. 10, 1960, 2323 - 2329

X

TEXT: The present work supplies data on the effect of the nature of the sorbed ion on the radiation-chemical stability of cationite KU-2. The resin, in spherical form, with particle size 0.6 - 0.8 mm was freed from impurities by washing with hydrochloric acid, alkaline solution and distilled water. Air-dryed resin in the N-form was saturated with a solution of the salts of following ions: Li^+, Na^+, NH_4^+, K^+, Rb^+, Cs^+, Mg^{2+}, Ca^{2+}, Sr^{2+}, Ba^{2+}, Ag^+, Co^{2+}, Cu^{2+}, Fe^{3+} and Tb^{3+}. The treated resin was sealed in ampules, placed in water medium and exposed to a Co^{60} γ-source, equivalent to 1400

Card 1/3

Radiation-chemical stability ...

gm. eq. ^{6} of Ra, with dosages of 0.76 x 10^{8} - 8.5 x 10^{8} roentgens at 18-20°C. After treatment the resin was filtered off, washed well with water and transformed into the hydrogen form with a 2N solution of HCl. The total acidity of wash liquor was determined volumetrically using methyl orange as indicator and concentrations of the ions by complexometric methods. The moisture and hydration of the resin were determined by a centrifugal method. The reduction ability of the resin was found by determining the quantity of ferrous iron formed after seven days interaction of 1 gm of the resin with 100 mls. of 0.01 molar-solution of ferric chloride. The results obtained show that γ-irradiation of resin KU-2 saturated with ions of different metals and for the integral dosages of 0.76-- 8.5 x 10^{8} roentgens, results in a change of the physical-chemical properties of sorbed ions. The exposure of resin in the hydrogen form decreases its exchange capacity, forms new inorganic groups, increases hydration state and reduction ability of the resin. This indicates destruction of the polymer by the radiation. The radiation-chamical behavior of resin KU-2, saturated with ions

5.3831 also 1526, 1581

27066
S/080/61/034/003/006/017
A057/ A129

AUTHORS: Kuzin, I. A., Semushin, A. M.

TITLE: Radiochemical resistance of carboxylic resins and oxidized carbon

PERIODICAL: Zhurnal prikladnoy khimii, v. 34, no. 3, 1961, 577 - 580

TEXT: Resistance of oxidized carbon and weakly acidic КФУ (KFU), КБ-4П-2 (KB-4P-2), and КМТ (KMT) cation exchange resins against gamma-radiation emitted by a ^{60}Co source was investigated. In former papers [Ref. 1: ZhPKh, 32, 2193 (1959), and Ref. 2: Tezisy dokladov nauchno-tekhnicheskoy konferentsii LTI im. Lensoveta (Theses of Reports of the Scientific and Technical Conference of the Leningrad Technological Institute imeni Lensovet), Goskhimizdat, 139 (1960)] the present authors demonstrated that resistance of swollen cation exchange resins against radioactive radiation and chemical agents depends on the structure of the resin, and the exchanged ion. The lowest resistance was observed in weakly acidic ion exchange resins. Exposed to an integral dosis of $1.38 \cdot 10^8$ roentgen the capacity of the KB-4P-2 exchange resin was decreased to 40%. Also other authors, like Vedemeyer [Ref. 3: Ionoobmennaya tekhnologiya (Ion exchange technology), Metallurgizdat, 442 (1950)], and A. P. Polevodov et al. [Ref. 4: NDVSh., Khim. i khim. tekhn.,

Card 1/6

Radiochemical resistance of carboxylic resins and...

KB-4P-2 resins, which differ only in the type of the cross-linking agent, show low resistance. Resistance of carboxylic resins in H-form depends generally on the structure of the sorbent's skeleton to which the -COOH group is linked. For this reason a more detailed investigation on KB-4P-2 resin in H-form was carried out. It was observed that irradiation causes gas evolution, scraps of the polymethacrylic acid chain are formed and are transferred into the aqueous phase. By evaporating this aqueous extract, a transparent film with an exchange capacity of 8 mg.eq/g is obtained. Also the total acidity of the aqueous phase is lower than the capacity lost by the cation exchange resin. These results indicate that by irradiation of resins swollen in water ion exchange groups are destroyed and a rupture of the main chains of the polyelectrolyte occurs. Swelling and water capacity of the resin in water increase initially with the irradiation dose, but decrease slowly afterwards. This would indicate that cross-linking processes prevail for an irradiation dose of $> 10^8$ roentgen. Corresponding tests carried out in alkaline solutions proved the predomination of destruction processes in the resin and loosening of the space lattice of the copolymer. The slow decrease in swelling capacity in water for $> 10^8$ roentgen is explained by the present authors with a considerable decrease of the number of ion exchange groups per 1 g of absolutely dry resin. Results obtained with irradiated dry resin indicate that the radiation effect on

Card 3/6

Radiochemical resistance of carboxylic resins and...

ASSOCIATION: Leningradskiy tekhnologicheskiy institut imeni Lensoveta (Leningrad Technological Institute imeni Lensovet)

SUBMITTED: September 30, 1960

Table. Effect of gamma-radiation on physico-chemical properties of some sorbents

Legend: (1) sorbent, (2) medium, (3) dose (roentgen·10^8), (4) lost in capacity (%), (5) absolute swelling capacity (ml/g), (6) water capacity (g H_2O/g resin), (7) hydration capacity (millimole/mg·eq), (8) total, (9) per 1 g of absolutely dry resin, (10) in H_2O, (11) in 0.1 N NaOH solution, (12) oxidized carbon in H-form, (13) KFU resin in H-form, (14) KMT resin in H-form, (15) KB-4P-2 resin in H-form, (16) KB-4P-2 resin in Na-form, (17) KB-4P-2 in H-form, (18) air

Card 5/6

S/844/62/000/000/103/129
D204/D307

AUTHORS: Kuzin, I. A. and Semushin, A. M.

TITLE: A study of the influence exerted by the nature of the adsorbed ion on the radiochemical behavior of certain cationites

SOURCE: Trudy II Vsesoyuznogo soveshchaniya po radiatsionnoy khimii. Ed. by L. S. Polak. Moscow, Izd-vo AN SSSR, 1962, 611-615

TEXT: The behavior was studied of КУ-2-8 (KU-2-8) and КБ-4П-2 (KB-4P-2) saturated with H^+, alkali metal ions, NH_4^+, Mg^{2+}, Ca^{2+}, Sr^{2+}, Ba^{2+}, Ag^+, Cu^{2+}, Tl^{3+} and Fe^{3+}, and γ irradiated in water, at 15 - 20°C, owing to a lack of knowledge in this field. After irradiation the resins were converted to the H^+ form and their physicochemical properties were determined by the methods described earlier (ZhPKh, 32, 2193 (1959)). On irradiation, Ku-2-8 (sulfonated copolymer of styrene and divinylbenzene) changed both its physical

Card 1/3

L 13577-63 EPR/EPF(c)/EWP(q)/EWT(m)/BDS AFFTC/ASD Ps-4/Pr-4 WH

ACCESSION NR: AP3000191 S/0080/63/036/004/0914/0917

AUTHOR: Kuzin, I. A.; Semushin, A. M.; Taushkanov, V. P.

TITLE: The effect of Co sup 60 Gamma radiation on the ion-exchange properties of oxidized coals

SOURCE: Zhurnal prikladnoy khimii, v. 36, no. 4, 1963, 914-917

TOPIC TAGS: Gamma radiation, ion-exchange properties, cation-exchange property, anion-exchange property, hydrochloric acid, cation-exchange capacity, sodium ion, NaOH, anion-exchange, chlorine ion

ABSTRACT: The radiation stability of activated coals of various compositions with cation and anion exchanging properties was studied. The test samples of coal were treated with 1N hydrochloric acid and, after that, by a 1 N solution of ammonia, distilled water, and then were dried to a constant weight. The cation-exchanging capacity of the coals was determined by the sodium ion by bringing 0.5 g of coal in contact with a 50 ml 0.1 solution of NaOH. The anion-exchanging capacity was determined by the chlorine ion in 0.1 N solutions of hydrocloric acid. Coals which were charged into OH form and oxidized coals which were charged into the H and Na forms were subjected to irradiation in

Card 1/2

L 13577-63

ACCESSION NR: AP3000191

water. In the latter case, the weighed portions of coal which were preliminarily oxidized by nitric acid were saturated by sodium ions from 0.2 N of NaOH. The coal was irradiated at room temperature by a Co sup 60 Gamma-radiating source. The study of the physico-chemical properties of the coals up to and after irradiation was done in accordance with a previously described method (Semushin, A. M., Kuzin, I. A.; Zhurnal prikladnoy khimii, v. 32, 1959, p. 2193). Ion exchangers with cation capacity from 2.41 to 4.87 mg-equiv/g were obtained by oxidizing brand BAU, KAU, SKT, and SKLT activated coals with nitric acid. The physico-chemical and ion-exchanging properties of the oxidized coals do not change with radiation doses of 1.5 x 10 sup 8 to 1.9 x 10 sup 8 roentgens. Orig. art. has: 4 tables.

ASSOCIATION: none

SUBMITTED: 21Jun62 DATE ACQ: 12Jun63 ENCL: 00

SUB CODE: CH NO REF SOV: 007 OTHER: 000

Card 2/2

BR

ACCESSION NR: AP4032497 S/0080/64/037/004/0760/0764

AUTHOR: Semushin, A. M.; Kuzin, I. A.

TITLE: The effect of the structure of weakly acid cationites on their resistance to the action of radiation.

SOURCE: Zhurnal prikladnoy khimii, v. 37, no. 4, 1964, 760-764

TOPIC TAGS: cationite, weakly acid cationite, structure, radiation resistance, radiation stability, swelling, ion exchange capacity, ion exchange capacity loss, cross linkage, aliphatic cationite resin, aromatic cationite

ABSTRACT: The influence of radiation on weakly acid cationites and the effect of the structure of these cationites on their radiation chemical stability was investigated. The cationites were irradiated in their hydrogen and sodium forms with cobalt-60 in doses up to 1.7×10^8 roentgens; the changes in their physical chemical properties (amount of swelling and loss in exchange capacity) were recorded. The cationites KMT, SG-1, KB-4P-2, aliphatic polymers based on methacrylic acid, lose 17-66% of their exchange capacity on radiation with 1.5×10^8 roentgens. It was established that this loss and swelling on irradiation depends

Card 1/2

L 21771-65 EPF(c)/EWT(m) Pr-4 BSD DJ

ACCESSION NR: AP4032504 S/0080/64/037/004/0893/0895

AUTHOR: Lou, Yun-sheng; Kuzin, I. A.; Semushin, A. M.

TITLE: Investigation of the radiation stability of several monofunctional anionites

SOURCE: Zhurnal prikladnoy khimii, v. 37, no. 4, 1964, 893-895

TOPIC TAGS: polystyrene anionite, monofunctional anionite, radiation stability, quaternary ammonium containing anionite, ion exchange capacity, anionite decomposition

ABSTRACT: The effect of the structure of the quaternary ammonium groups in polystyrene anionites on the stability of the anionite to gamma irradiation was studied because of the scar of published data on the subject. Waterswelling anionite resins ASD-2, ASD-3, ASD-4, AV-17 and AMP were subjected to radiation doses from 0_2 to 3.6×10^8 roentgens. The resins in which aliphatic radicals are attached to the quaternary nitrogen atom have low radiation-chemical stability, while the anionites containing pyridine radicals (ASD-3 and AMP) are stable. Since the loss in exchange capacity on irradiation of the pyridine-containing anionites is only 5-7%, as compared with 30-40% for the other resins, it is assumed that the

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L 21771-65

ACCESSION NR: AP4032504

basic process in swelled anionites, resulting directly or indirectly from the action of irradiation, is the splitting off of the ion exchange groups. "The authors take the opportunity to thank Ye. B. Trostyansk and S. B. Makarov for supplying the anionite ASD type samples." Orig. art. has: 1 figure and 1 table.

ASSOCIATION: none

SUBMITTED: 01Feb63 ENCL: 00 SUB CODE: IC, NP

NO REF SOV: 005 OTHER: 0002

Card 2/2

L 23641-65 EWG(j)/EWT(m)/EPF(c)/EPF(n)-2/EWP(j)/EWA(h)/EWA(l) Pc-4/Pr-4/
Pu-4/Peb GO/JAJ/RM

ACCESSION NR: AP5002828 S/0191/65/000/001/0041/0044

AUTHOR: Lou, Yun-sheng; Kuzin, I.A.; Semushin, A.M.; Rtishchev, N.I. 33 32 B

TITLE: Radiation degradation of some ion exchange resins

SOURCE: Plasticheskiye massy, no. 1, 1965, 41-44

TOPIC TAGS: ion exchange resin, radiochemical stability, polyfunctional resin, polycondensation resin, phenol formaldehyde resin, styrene copolymer, divinylbenzene copolymer, ionizing radiation, anion exchange group, intermolecular bond

ABSTRACT: The results of experiments on the radiation stability of certain anion exchange resins and the dependence of this stability on the structure and properties of the exchange ions are presented. Various resin types were saturated with Cl^-, NO_3^-, $SO_4^=$ and OH^- ions, irradiated and analyzed for changes in the basic physical-chemical properties of the resins. A polyfunctional resin of aliphatic structure changed noticeably during irradiation; at a dose of 2×10^8 r, depending on the nature of the exchange ion, this resin sample lost 28-50% of its exchange capacity. A polycondensation type ion exchange resin possessing benzene nuclei in addition to aliphatic chains showed that the aromatic nuclei have a definite effect on the resin's radio-chemical stability. The loss of exchange capacity and changes in other resin properties also depended on the radiation

Card 1/2

L 23641-65
ACCESSION NR: AP5002828

dose and nature of the exchange ion. A phenol-formaldehyde anion exchange resin containing secondary and tertiary ammonium bases and benzene rings showed high radiation stability. Two monofunctional anion exchange resins synthesized on a base of polystyrene and divinylbenzene were also subjected to radiation and were found to have high radiation stability. The most stable resin was an anion exchange resin prepared from a polystyrene-divinylbenzene copolymer. The loss of capacity in this case at a 1.7×10^8 r radiation dose did not exceed 5%. It is seen from the data that the resin's structure has a greater influence on its radiation stability than the nature of the exchange ions. The stability of anion exchange resins to ionizing radiation is determined chiefly by the structure of the polymer framework and the anion exchange groups and by the number and nature of the intermolecular bonds. Orig. art. has: 5 tables and 5 structural formulas.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: MT

NO REF SOV: 004 OTHER: 000

Card 2/2

MINANDROVA, V.G.; SEMUSHINA, L.A.; NEVEL'SHTEYN, G.S., dotsent, nauchnyy rukovoditel' raboty

Redional variations in the natural movement of population in the U.S.S.R. Uch. zap. Ped. inst. Gerts. 239:173-175 '64. (MIRA 18:3)

SEMUSHINA, T.N.; VLADIMIROVA, N.I.

Use of branchy yeasts in the production of hydrolytic alcohol. Gidroliz. i lesokhim. prom. 14 no.4:7-9 '61. (MIRA 14:5)

1.Nauchno-issledovatel'skiy institut gidroliznoy i sul'fitno-spirtovoy promyshlennosti.
(Yeast) (Alcohol)

SEMUSHINA, T.N.; VLADIMIROVA, N.I.

Selecting strains of yeast for new sulfite and yeast plants.
Gidroliz. i lesokhim. prom. 14 no.7:12-13 '61. (MIRA 14:11)

1. Nauchno-issledovatel'skiy institut gidroliznoy i sul'fitno-spirtovoy promyshlennosti.
(Yeast)

SEMUSHINA, T.N.; STAKHORSKAYA, L.K.; MONAKHOVA, N.I.

Utilization of various sugars by fodder yeast cultures.
Mikrobiologiia 32 no.5:863-868 S-O'63 (MIRA 17:2)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut gidroliznoy i sul'fitno-spirtovoy promyshlennosti, Leningrad.

ANDREYEV, K.P.; SEMUSHINA, T.N.; MONAKHOVA, N.I.

Return of post-yeast mashes for sulfite liquor dilution in yeast production. Sbor.trud.NIIGS 12:113-123 '64.
(MIRA 18:3)

L 32815-65 EWT(1) IJP(c) S/0048/65/029/001/0082/0085

ACCESSION NR: AP5004528

15

AUTHOR: Popova, M.N.; Semushkin, G.B.; Tsikin, A.N. 21 B

TITLE: Changes in the electric properties of alkali halide crystals under prolonged application of a dc field /Report, 12th Conference on Luminescence held in L'vov 30 Jan-5 Feb 1964/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.29, no.1, 1965, 82-85

TOPIC TAGS: alkali halide, single crystal, tenebrescence, electric conductivity, aging process

ABSTRACT: The aging of KCl and KBr crystals in fields from 50 to 1000 V/cm was investigated at temperatures from 350 to 650°C (400 to 500° for KBr). Metal foil electrodes were carefully attached to the crystals, and the contact was considered satisfactory provided no trace of oxidation of the electrode could be seen after the experiment. The current versus time curves showed four distinct regions: an initial region of constant current, a region of rapidly increasing current, another region of nearly constant current, and a final region of rapidly increasing current leading to breakdown. All four regions of the current curve were clearly marked in

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L 32815-65

ACCESSION NR: AP5004528

the case of the KBr crystals, and tenebrescence was either absent or very weak. When tenebrescence was observed it appeared simultaneously throughout the crystal with no trace of tenebrescence front. With the KCl crystals only the first three regions of the current curve were ordinarily observed, and these were less sharply distinguished than in the case of KBr. Tenebrescence was regularly observed but different crystals behaved differently in this respect. In some crystals the coloring appeared simultaneously throughout the crystal as in KBr, and in others a region containing a considerable concentration of F centers formed at the cathode and grew toward the anode. Discharge currents decaying slowly with time were observed with all crystals when the aging was interrupted at any stage and the electrodes short circuited. Some but not all of the results can be interpreted in terms of the electrolytic theory of G.Heiland (Z.Phys.128,144,1950); it is suggested that two processes are involved, one of which is described by Heiland's theory, while the other requires further study. Orig.art.has: 3 figures.

ASSOCIATION: none

SUBMITTED: 00/--Jan65 ENCL: 00 SUB CODE: SS

NR REF SOV: 001 OTHER: 001

Card 2/2

L 23698-66 EWT(1)/EWT(m)/EWP(t) IJP(c) JD/JG

ACC NR: AR6005220 SOURCE CODE: UR/0058/65/000/009/E074/E074

56

B

AUTHOR: Kunin, V. Ya.; Semushkin, G. B.; Tsikin, A. N.

TITLE: Study of the processes occurring in KBr crystals under the influence of an electric field

SOURCE: Ref. zh. Fizika, Abs. 9E624

REF SOURCE: Sb. Proboy dielektrikov i poluprovodnikov, M.-L., Energiya, 1964, 333-338

TOPIC TAGS: potassium bromide, electric field, color center, alkali halide, electric conductivity

TRANSLATION: Under the influence of an electric field at high temperatures, coloring (C) of alkali-halide crystals by F centers takes place. In this case one observes an increase in the electric conductivity of the crystal. Results are presented of a study of the kinetics of the C, and also of the changes of the electric properties of the crystals during C and discoloring. The experiments have been made in the temperature range 400--620C at electric field intensities 3--30 v/mm. At temperatures < 450C, there is either no C at all, or else it develops so slowly that it is impossible to relate an increase in the electric conductivity with it. The obtained data cannot be explained on the basis of the existing hypothesis on the mechanism of electrolytic C of alkali-halide crystals. A. Petrashko.

SUB CODE: 20

Card 1/1

L 44596-66 EWT(1)/EWT(m)/EWP(t)/ETI IJP(c) JD/JG

ACC NR: AR6010499 SOURCE CODE: UR/0196/65/000/010/B005/B006

30
29
B

AUTHOR: Kunin, V. Ya.; Semushkin, G. B.; Tsikin, A. N.

TITLE: A study of the processes occurring in KBr crystals under the effect of an electric field

SOURCE: Ref. zh. Elektrotekhnika i energetika, Abs. 10B36

REF SOURCE: Sb. Proboy dielektrikov i poluprovodnikov. M.-L., Energiya, 1964, 333-338

TOPIC TAGS: potassium bromide, color center, single crystal structure, crystal electric conductivity

ABSTRACT: Under the effect of an electric field at high temperatures and in a vacuum-tight contact between the cathode and the crystal, the coloring (C) of alkali-haloid crystals by F-centers occurs. In this case an increase in the electrical conductivity (EC) of the crystal is observed. The results of a study of the kinetics of the C process are given, and also the changes in the electrical properties of the crystals during C and decolorization. The experiments were conducted in the temperature region of 400—620C with electric field intensity of 3—30 w/mm. At temperatures of < 450C, C either does not occur at all or develops so weakly that it is impossible to associate a significant increase in EC with it. The time dependences

Card 1/2 UDC: 621.315.61.011.2

SEMUSHKIN, V.N.

Results of surgical treatment of chronic coronary insufficiency by the Fieschi method. Trudy Inst. klin. i eksp. khir. AN Kazakh. SSR 9:64-67 '63. (MIRA 17:12)

TITOV, V.A.; NYZHIKOVA, S.M.; SEMUSHKINA, T.I.

The AKAS-N coding device. Trudy NIIGMP no.14:133-139 '65.
(MIRA 18:9)

ORLOVA, L.A.; SEMUSHKINA, T.S.

Development of standards for reusable nondisjointable containers made of boards and plywood. Trudy NIL Tary no.4:50-58 '60. (MIRA 14:12)

(Boxes--Standards)
(Plywood)

ORLOVA, L.A.; SEMUSHKINA, T.S.

Boxes. Standartizatsiia 27 no.9:39-40 S '63. (MIRA 16:10)

SEMUSHKINA, T.V.

Relationship between the number of Schoenbaueria matthiessemii (family Simulidae) and the nature of spring flooding in the narrows of the Kuybyshev Reservoir. Med.paraz.i paraz.bol. 30 no.1:48-50 Ja '61. (MIRA 14:3)

1. Iz Respublikanskoy sanitarno-epidemiologicheskoy stantsii Ministerstva zdravookhraneniya Chuvashskoy ASSR.
(KUYBYSHEV RESERVOIR--BLACK FLIES) (DIPTERA)

SEMUSHKINA, T.V.

Migrations of blackfly larvae in the zone of foundation thinning out in the Kuybyshev Reservoir. Med.paraz.i paraz.bol. no.1:15-18 '62. (MIRA 15:5)

1. Iz Respublikanskoy sanitarno-epidemiologicheskoy stantsii Ministerstva zdravookhraneniya Chuvashskoy ASSR.
(KUYBYSHEV RESERVOIR--BLACK FLIES)

VOLKOV, K.I.; ZAGIBALOV, P.N.; SEMUSHIN, A.P., nauchnyy red.; FEDOROVA, T.N., red.izd-va; MEDVEDEV, L.Ya., tekhn.red.

[Technology of mica] Tekhnologiia sliudy. Moskva, Gos. izd-vo lit-ry po stroit., arkhit. i stroit. materialam, 1958. 243 p. (MIRA 12:2)
(Mica)

SEMUSHKIN, B.

Forty years of scientific pedagogical activities. Pozh. delo 6 no.8:12 Ag '60. (MIRA 13:8)
(Pozdneev, Matvei Vladimirovich)
(Fire prevention)

SEMUSHINA, T.N.

USSR/Cultivated Plants - General Problems. M.

Abs Jour : Ref Zhur - Biol., No 4, 1958, 15464

Author : T.N. Semushina

Inst : The Peat Production Institute.

Title : Some Data on Heat Emission in Tests on Sphagnum Tow. (Nekotoryye dannyye o vydelenii tapla v opytakh so sfagnovym ochesom).

Orig Pub : Uch. zap. LGU, 1956, No 216, 120-124.

Abstract : Results of tests of the Peat Production Institute on the heat generation of sphagnum tow which is utilized as biological fuel. The test variations were: tow - lime (control); tow - lime - 2% glucose; tow - lime 2% peptone; sphagnum tow - lime - 2% gluocse - a bacterial suspension; tow - lime - 2% peptone - bacterial suspension. The maximal heat emission (in calories per hour)

Card 1/2

10

SEMUSHKIN, A.

Taking care of the quality. Mest.prom.i khud.promys. 2 no.3:16-17 Mr '61. (MIRA 14:4)

1. Direktor fabriki "Dorkozhgalantereya", Moskva.
(Leather goods)

KOGANZON, G., inzhener; SEMUSHKIN, B., inzhener.

Heating pipes by means of eddy currents. Zhil.-kom. khoz. 3 no.11: 25-26 [N]'53. (MLRA 6:12)
(Gaspipes)

SEMUSHKINA, T.V.

On mass attacks on humans by Dermanyssus gallinae mites. Med. paraz.i paraz.bol. 29 no.1:104 Ja-F '60. (MIRA 13:10)
(MITES)

LUPPOVA, N.N.; MOROZOVA, Z.A.; SEMUSHKINA, T.V.

Malaria in the Chuvash A.S.S.R. during the final stage of its eradication. Med. paraz. i paraz. bol. 32 no.3:267-270 My-Je '63 (MIRA 17:3)

1. Iz Chuvashskoy respublikanskoy sanitarno-epidemiologicheskoy stantsii (glavnyy vrach K.K. Sidorov).

SEMUSHKINA, Z. F. Cand Med Sci -- (diss) " Data on the diagnosis of gun-shot injuries of the bones ~~in relation~~ with respect to forensic medicine." Sverdlovsk, 1959. 16 pp (Sverdlovsk State Med Inst), 200 copies (KL, 45-59, 150)

SEMUTENKO, G.

Introduction of progressive work methods, our urgent task, p. 62.
PADOMJU LATVIJAS KOMUNISTS, Riga. Vol. 11, no. 3, Mar. 1956.

SOURCE: East European Acession List (EEAI) Library of Congress
Vol. 5, no. 8, August 1956.

SEMVESKIY, V. M.

SEMVESKIY, V. M.- "Investigation of the Parameters of Bar Underpinning and its Application." Min of Higher Education USSR, Leningrad Order of Lenin and Order of Labor Red Banner Mining Inst, Chair of Construction of Mining Enterprises, Leningrad, 1955 (Dissertations For Degree of Doctor of Technical Sciences)

SO: Knizhnaya Letopis' No. 26, June 1955, Moscow

ACCESSION NR: AP4034285 S/0207/64/000/002/0176/0176

AUTHORS: Semyachkin, B. Ye. (Novosibirsk); Solov'yev, A. N. (Novosibirsk)

TITLE: Experimental determination of electrical resistance of liquid alkali metals up to 1000 degrees C

SOURCE: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 2, 1964, 176

TOPIC TAGS: electrical resistance, lithium, sodium, potassium, rubidium, cesium, stainless steel capillary

ABSTRACT: The author works with lithium, sodium, potassium, rubidium and cesium in a stainless steel capillary of length ~ 600 mm and diameter 0.8/0.5 mm from the melting point to 950C or 1000C. Orig. art. has: 1 graph and 1 table.

ASSOCIATION: none

SUBMITTED: 20Nov63 DATE ACQ: 15May64 ENCL: 01

SUB CODE: MM,EM NO REF SOV: 002 OTHER: 002

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ACCESSION NR: AP4034285

ENCLOSURE: 01

t, °C	Li	Na	K	Rb	Cs
30	—	—	—	—	37.9
40	—	—	—	22.5	—
50	—	—	—	23.3	39.9
65	—	—	15.0	—	—
100	—	10.01	16.9	27.4	44.9
150	—	11.78	19.5	31.4	49.8
180	25.3		—	—	—
200	25.8	13.63	22.2	35.4	55.0
250	27.0	15.56	25.1	39.5	60.3
300	28.3	17.70	28.2	44.6	65.8
350	29.6	19.90	31.5	48.1	71.5
400	30.8	22.22	35.1	52.8	77.5
450	32.2	24.70	38.7	57.7	83.7
500	33.5	27.23	42.6	63.0	90.0
550	34.8	29.94	46.6	68.5	96.6
600	36.1	32.76	50.9	74.1	103.6
650	37.6	35.72	55.5	80.2	110.9
700	39.1	38.87	60.5	86.5	118.3
750	40.6	42.20	66.1	93.2	126.2
800	42.2	45.64	72.2	100.0	134.0
850	43.8	49.30	79.0	107.2	144.6
900	45.5	53.21	86.2	114.8	153.8
950	47.3	57.70	94.0	124.0	166.4
1000	49.0	61.87	102.3	—	—

Card 2/2

SEMYACHKIN, N.

Adherence to principles and conservatism. Sov.profsoiuzy 4 no.12:18-22 D '56. (MLRA 10:1)
(Moldavia--Construction industry)

SEMYACHKIN, N.

Aside from the main point. Sov.profsoiuzy 5 no.3:24-29 Mr '57.
(MLRA 10:4)

(Kuybyshev--Technical education)

SEMYACHKIN, N.

Visiting our northern neighbor. Sov.profsoiuzy 5 no.6:87-91 Je '57.
(Finland--Description and travel)

SEMYACHKIN, N.

Second birth. Sov.profsoiuzy 5 no.12:44-49 O '57. (MIRA 10:11)
(Rostov Province--Agricultural machinery industry)

SEMYACHKIN, N.

Concise and instructive brochure about a great matter ("Homes made with one's own hand." Reviewed by N. Semiachkin). Sov. profsoiuzy 6 no.1:93-94 Ja '58. (MIRA 11:1)
(Construction industry) (Housing)

NIKOLAYCHIK, N., SEMYACHKIN, N., (g. Taganrog).

Along the way indicated by the Party. Sov. profsoiuzy 6 no.15:13-23 N '58. (MIRA 11:12)

1.Spetsial'nyye Korrespondenty zhurnala "Sovetskiye profsoyuzy." (Taganrog--Trade unions)

1. SEMYACHKIN, S.
2. USSR (600)
4. Roofing, Iron and Steel
7. New method in roofing work, Za ekon. mat. No. 2, 1953.

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

SEMYACHKIN, S. Ye.

AID P - 221

Subject	:	USSR/Engineering
Card	:	1/1
Author	:	Semyachkin, S. Ye., Engineer
Title	:	Roof Covering with Steel Sheets by Means of Contact Welding
Periodical	:	Sbor. mat. o nov. tekh. v stroi., 1, 18-21, 1954
Abstract	:	The author's suggestion is to weld steel sheets by means of contact welding (with 5-6 mm overlapping), to roll them on drums, and to unfold them directly on the roof. Some equipment used in this operation is outlined. This method has been successfully tried in apartment house construction in Moscow. Photos, charts.
Institution	:	None
Submitted	:	No date

SEMYACHKIN,S.Ye., inzhener; FILARETOV,G.V., inzhener

Contact roller electric welding in roofing. Svar. proizv. no.2:20-21 F '55. (MLRA 8:9)
(Electric welding) (Roofs)

SEMYACHKIN, Sergey Yefremovich; FILARETOV, Gleb Vasil'yevich; SEREBRENNIKOVA, [illegible], red.; KUZ'MIN, D.G., tekhn.red.

[Protective and decorative nitration] Zashchitno-dekorativnoe azotirovanie. Moskva, Vses. uchebno-pedagog. izd-vo Trudrezervizdat, 1956. 36 p. (MIRA 11:2)
(Nitration)

SEMYACHKIN, S.Ye.; FILARETOV, G.V.; CHERNYAK, V.S., nauchnyy redaktor; KONTSEVAYA, E.M., redaktor; TORSHINA, Ye.A., tekhnicheskiy redaktor.

[Welded roofs] Svarnye krovli. Moskva, Vses.uchebno-pedagog. izd-vo Trudrezervizdat, 1956. 41 p. (MLRA 9:6)
(Roofing--Welding)

SEMYACHKIN, S. E.

SUBJECT: USSR/Welding 135-1-11/14

AUTHOR: Semyachkin, S.E., engineer.,

TITLE: Contact welding of barrels. (Kontaktnaya svarka bochek).

PERIODICAL: "Svarochnoye Proizvodstvo", 1957, # 1, p 28.

ABSTRACT: Resistance-welding process with rolling electrodes, introduced at the Baku mechanical plant of the Neftetara Trust. The process is used in production of barrels for oil products (gasolin, kerosene). It has proven to be more economical than other welding methods.

In the new technology, the surfaces to be welded are being prepared by etching, or by abrasive wheels. The etching requires only 10-12 kg of acid per ton of metal sheeting. The rolled barrel drum sheets are first stitched together into a cylinder on a spot-welding machine, then resistance - welded on a roller-electrodes machine of the МШМ-50 type (MShM-50) equipped with a circuit breaker of the ПИТ-50 (PIT -50) type. The bottoms are welded to the cylinders on the same welding machine.

Card 1/2

SEMYACHKIN, S.

Two-electrode spot welding. Prom.koop. no.3:29 Mr '57. (MLRA 10:4)

(Electric welding)

PHASE I BOOK EXPLOITATION SOV/3448

Semyachkin, Sergey Yefremovich

Sovremennyye metody elektrosvarki v izgotovlenii metallicheskikh yemkostey; opyt raboty predpriyatiy (Modern Methods of Electric Welding in the Manufacture of Metal Containers; Industrial Practices) Moscow, n.p. 1958. 100 p. 3,000 copies printed.

Ed.: I.L. Gol'dfel'd; Tech. Ed.: M. Lokhmanova.

PURPOSE: This book is intended for technical personnel and engineers working with automatic and semiautomatic electric welding.

COVERAGE: The book is a review of modern methods of electric welding used in Soviet industry. Types of resistance, submerged-arc, carbon-dioxide-shielded-arc, and argon-shielded-arc welding are discussed. Such recent developments as new types of flat electrodes and a process known as condenser-discharge welding are included. The latter was developed by the Institut elektrotekhniki AN UkrSSR. (Institute of Electrical Engineering, Academy of Sciences UkrSSR).

Card 1/4

25 (1) PHASE I BOOK EXPLOITATION SOV/1711

Semyachkin, Sergey Yefremovich, and Gleb Vasil'yevich Filaretov

Kontaktnaya elektrosvarka (Electric Resistance Welding) Moscow, Trudrezervizdat, 1958. 125 p. (Series: Biblioteka molodogo rabochego) 17,000 copies printed.

Scientific Ed.: V.S. Chernyak; Ed.: T.I. Rychek; Tech. Ed.: A.M. Toker.

PURPOSE: This booklet is intended for young welders who have graduated from training centers for labor reserves. It may also be useful to resistance welders in various branches of industry.

COVERAGE: The booklet contains a brief description of resistance welding methods and the welding equipment commonly used in Soviet industry. Modern methods of spot, seam, flash, and projection welding are described and illustrated. Welding of cast iron, titanium, nonferrous materials, and plastics is mentioned. The author states that the use of condensers in resistance welding is a recent development in Soviet welding technology. Welding with induction heating and soldering by means of resistance welders is also described. No personalities are

Card 1/4

Electric Resistance Welding

SOV-135-58-9-4/20

AUTHORS: Semyachkin, S. Ye. and Trofimov, F.G., Engineers

TITLE: Welding Plastics With High Frequency Current (Svarka plasticheskikh mass tokami vysokoy chastoty)

PERIODICAL: Svarochnoye proizvodstvo, 1958, Nr 9, pp 9-11 (USSR)

ABSTRACT: Information is presented on new, special equipment used for welding thermoplastics with high frequency current. The following devices and their operation are described: "LGS-02" machine (fig. 1) and "MST-3M" machine (fig. 3) for roller welding; "LGSP-0.4" press (fig. 4) for press welding. Characteristics of the machines are given in table 1. Information includes description of methods for checking the tightness of seams and of the base material by: 1) electric spark method on a special device shown in fig. 6; 2) use of a 2% aqueous solution of fuchsin; 3) electrolytic method. There are 2 tables, 3 diagrams, 1 circuit diagram and 3 photos.

1. Plastics--Welding 2. Plastics--Bonding 3. High frequency currents--Applications

Card 1/1

AUTHOR: Semyachkin, ~~Ye.~~S.Ye., Engineer SOV/117-58-12-14/36

TITLE: Soldering on Contact Electric-Welding Machines (Payka na kontaktnykh elektrosvarochnykh mashinakh)

PERIODICAL: Mashinostroitel', 1958, Nr 12, pp 18 - 19 (USSR)

ABSTRACT: It is stated that soldering on electric contact welding machines has considerable advantages over soldering with gas flame torches or other devices. Resistance coldering can be carried out by direct heating of the metal with electric current, or with the use of electrodes. In both cases, the parts at the moment of fusing are compressed by the electrodes to form high quality joints. The use of impulse electric welding machines is recommended, as their basic advantage is an accurate, controlled power feed. The technology of the soldering process is given. It was proved that the soldered joints were stable at 10 atm pressure tests. The method can be used at any plant equipped with electric contact machines of 5 to 15 kva capacity, and the

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Soldering on Contact Electric-Welding Machines

only technological equipment required are special electrodes, the shape of which depends on the shape of the respective parts. There are 3 diagrams.

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PHASE I BOOK EXPLOITATION SOV/3667

Semyachkin, Sergey Yefremovich

Sovremennyye sposoby svarki plasticheskikh mass (Modern Methods of Welding Plastics), Moscow, Trudrezervizdat, 1959. 115 p. (Series: Novaya tekhnika i peredovyye metody truda) 6,500 copies printed.

Scientific Ed.: G.Z. Vashin; Ed.: V.S. Ishkhanov; Tech. Ed.: A.M. Toker.

PURPOSE: This booklet is intended for teachers and shop instructors at vocational trade schools. It may also prove useful to engineering and technical personnel engaged in the production of parts and constructions from plastics.

COVERAGE: This booklet deals with industrial methods of welding plastics, types of welding equipment, and processes of manufacturing plastics. The author analyzes the physicochemical properties of plastics and points out various applications in industry and in daily life. He stresses the advantages of welding over other methods of joining plastics. No personalities are mentioned. There are 2 references, both Soviet.

Card 1/4

Modern Methods of Welding Plastics

TABLE OF CONTENTS:

TM/mas
6-21-60

S/117/61/000/003/009/011
A004/A101

AUTHOR: Semyachkin, S. Ye.

TITLE: Equipment and apparatus for the welding of plastics

PERIODICAL: Mashinostroitel', no. 3, 1961, 31 - 34

TEXT: The author describes a range of machines for the welding of plastic films having a thickness in the range of 25 - 500 μ. The h-f welders enumerated in the first table use a frequency range of 20 - 70 Mc and consist of an h-f tube generator, electrode feed mechanism, electrode-holder, working table and electrodes. The ЛГС-02 (LGS-02) welder is intended for the roll welding of vinyl-plastics, polyamide and other thermoplastic films and sheets with continuous seams. The sheets are rolled between two roll-type electrodes to which h-f current is supplied. The МСТ-3М (MST-3M) welder has also been devised for roll and spot welding of plastics. The ВСЧ-0.2 (VSCh-0.2), ВСЧ-0.4 (VSCh-0.4) and ЛГС-1.5 (LGS-1.5) welders are the latest models of h-f welding equipment for pressure welding. The rated annual technological and economic efficiency of these welders, depending on the peculiarities of production, amounts to 10 - 20 thousand rubles per 1 kw of h-f power or 5 - 10 thousand rubles per 1 kw of in-

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Equipment and apparatus for the welding of plastics

stalled power. The capital invested in these machines is amortized within 3 - 4 months if an h-f welding section is introduced at the plants. The VSCh-0.2 welder fitted with a УКВ-0.2 (UKV-0.2) tube generator and РК-3 (RK-3) h-f feeder has a box shape. The models VSCh-0.4 and VSCh-0.4A differ from each other in that way that the former model operates on non-shielded electrodes while the latter has shielded electrodes. Both welders are equipped with UKV-0.4 tube generators, pedal drive, h-f feeder and electrodes whose shape depends on the parts being welded. Table 1 presents the technical data of the above-mentioned welding machines. Since polyethylene, fluoroethylene, polypropylene and other plastics cannot be h-f welded, a number of welding machines for the semi-automatic welding of the above-mentioned plastics has been developed. The МСП-1 (MSP-1) machine is intended particularly for welding large-size parts (straight "T" or lap joints of 25 - 100 thickness. Welding is carried out through a strip of cellophane or polytetrafluoroethylene. In the МСП-2 (MSP-2) machine the material being welded is not heated by the heating unit, which ensures a high strength of the parts being welded. The tearing strength of the welds amounts, under optimum conditions, to 90 - 98% of the basic material. In the МСП-4 (MSP-4) machine, which can weld sheets up to 500 μ thick, the heat is supplied by heating blocks made of spring steel strip. Table 2 shows the technical data of these welding machines. The

author then describes machines for the supersonic welding of plastic sheet material 2 - 10 mm thick. The technical characteristics of these machines are given in table 3. Besides the machines of the type mentioned in the table the author cites the ПУТ-5 (PUT-5) and ПУТ-5А (PUT-5A) models, as well as the УЗП-1 (UZP-1) welder intended for the stepped spot and seam welding of plastics on account of utilization of the energy of supersonic oscillations. For the gas-welding of plastics the modernized multipurpose СУ-48 (SU-48) and ГГП-56 (GGP--56) torches have been devised, where the plastic being welded is heated by a mixture of the gas combustion product and compressed air, developing a temperature of 250 - 300°C. There are 10 figures and 3 tables.

Table 1:

1) indices; 2) seam welder models; 3) pressure welder models; 4) portable VSCh-0.2 welder; 5) maximum power required from the mains, in v; 6) supply network voltage, v; 7) number of network phases, in pieces; 8) maximum current required from the network, in amp; 9) maximum oscillating power, v; 10) rated oscillating power, v; 11) frequency, Mc; 12) material feed speed, mm/min; 13) seam width, mm; 14) maximum electrode area, cm^2; 15) pressure, kg; overall dimensions in mm: a) length, b) width, c) height.

Equipment and apparatus for the welding of plastics

1) Показатели	2) Шовные машины типов		3) Сварочные прессы типов				4) Переносная сварочная машина
	ЛГС-0,2	МСТ-3М	ЛГСП-0,4	ВСЧ-0,4	ВСЧ-0,4А	ЛГС-1,5	ВСЧ-0,2
5) Максимальная мощность, потребляемая от сети, в *вт*	1100	1000	2000	1100	1100	3800—4000	600
6) Напряжение питающей сети в *в*	220	220	220	220	220	220	220
7) Количество фаз в сети в шт.	1	1	1	1	1	1	1
8) Максимальный ток, потребляемый из сети в *а*	5	5	9	10	10	—	—
9) Максимальная колебательная мощность в *вт*	300	—	450	До 400	До 400	—	—
10) Номинальная колебательная мощность в *вт*	200	—	400	400	400	—	—
11) Частота в *мгц*	39+1	39+1	39+1	39+1	39+1	38—40	21,275—63,825
12) Скорость подачи материалов в *мм/мин*	0,5—3	3	1—5	До 4	До 4	До 5	—
13) Ширина шва в *мм*	1,5—6	2—6	1,5—4	2—2,5	2—2,5	—	2
14) Максимальная площадь электродов в *см²*	—	—	10	13	13	25	2
15) Давление в *кг*	—	—	5—60	150	150	200	—
16) Габарит в *мм*:							
а) длина	1100	1100	950	1100	1100	1700	310
б) ширина	700	700	600	780	780	820	285
в) высота	1200	1200	1200	1400	1400	950	275

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Equipment and apparatus for the welding of plastics

Table 2:

indices	welding machine type		
	MSP - 1	MSP - 2	MSP - 4
welding method	contact welding with unilateral heating of the material in the welding zone	by heated air or gas	contact welding with bilateral heating of the material in the welding zone

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A004/A101

Equipment and apparatus for the welding of plastics

Table 2 continued:

		a)	b)	c)
3)	Процесс сварки . .	Непрерывный	Непрерывный	Непрерывный
4)	Толщина свариваемого материала в *мк*	25—100	25—100	До 500
5)	Ширина свариваемого шва в *мм* . .	5	3	5
6)	Расход газа в *л/час*	—	2500—3000	—
7)	Скорость сварки в *м/мин*	До 12	До 6	0,08—0,9
8)	Привод механизма давления	d) Грузовой, рычажный	—	—
9)	Максимальное контактное давление в *кг/см²*	До 6	6	До 3
10)	Напряжение сети в *в*	220	220	220
11)	Габарит в *мм* . .	752×1030××1095	1030×750××1030	1450×1000××1240
12)	Вес машины в *кг* .	113	73	205
13)	Общая мощность электродвигателей машин в *квт* . .	2,3	2,1	2,5

3) welding process: a) continuous, b) continuous, c) continuous; 4) thickness of material being welded, 5) width of seam being welded, mm; 6) gas consumption, liter/h;. 7) welding speed, m/min; 8) pressure mechanism drive: a) load-lever drive 9) maximum contact pressure, kg/cm^2; 10) network voltage, v; 11) overall dimensions, mm; 12) machine weight, kg; 13) aggregate power of machine electromotors, kw.

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S/117/61/000/003/009/011
A004/A101

Equipment and apparatus for the welding of plastics

Table 3:

1) indices; 2) machine for stepped spot and seam welding; 3) machine for spot and pressure welding; 4) thickness of material being welded, mm; 5) supply network voltage, v; 6) pressure mechanism drive: a) pneumatic; b) by pedal; 7) working pressure per spot, kg; 8) required power of the supersonic generator, kw; 9) operation frequency, kc; 10) amount of spots per minute; 11) cooling of magnetostriction device: a) water; b) water; 12) overall dimensions, mm; 13) weight of machine, kg.

Таблица 3

1) Показатели	2) Машины для точечной и шовно-шаговой сварки	3) Машины для точечно-прессовой сварки
	УЗГС-1	ПУТ-2
4) Толщина свариваемого материала в *мм*	2—10	15
5) Напряжение питающей сети в *в*	230/380	220
6) Привод механизма давления	а) Пневматический	б) Педальный
7) Рабочее давление на точку в *кг*	5—400	10—250
8) Потребляемая мощность ультразвукового генератора в *ква*	6	3
9) Рабочая частота в *кгц*	20	20
10) Производительность точек в минуту	6—30	До 60
11) Охлаждение магнитострикторa	а) Водяное	б) Водяное
12) Габарит в *мм*	1425×700×2500	520×520×1410
13) Вес машины в *кг*	980	120

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SEMYACHKIN, S. Ye.

SEMYACHKIN, Sergey Yefremovich; FILARETOV, Gleb Vasil'yevich; CHERNOV, Ye., red.; POKHLEBKINA, M., tekhn. red.

[Resistance welding of metals and plastics]Kontaktnaia svarka metalla i plastmass. Moskva, Mosk. rabochii, 1962. 162 p. (MIRA 15:12)

(Metals—Welding) (Plastics—Welding)

SEMYACHKIN, S., inzh.

Welding of plastics. Mest.i khud.promys. 3 no.7:16-17 Jl '62. (MIRA 15:8)

(Plastics---Welding)

S/081/63/000/002/078/088
B117/B186

AUTHOR: Semyachkin, S.

TITLE: Welding of Plastics

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 2, 1963, 544, abstract 2T79 (Mestn. prom-st' i khudozhestv. promysly, no. 7, 1962, 16-17)

TEXT: Welding methods for plastics (by high-frequency current, contact heating, gaseous heat carriers, friction and ultrasonics), and welding equipment used are briefly described. [Abstracter's note: Complete translation.]

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SEMYACHKIN, S., inzh. (Moskva)

Easily avaliable and economical. Mest.prom.i khud. promys. 3 no.1: 23-24 Ja '63. (MIRA 16:2)
(Moscow--Renting of equipment, etc.) (Interchangeable mechanisms)

PEREPECHIN, Boris Mikhaylovich, kand.sel'skokhoz.nauk; SEMYACHKIN, V.S., red.; POLUNICHEV, I.A., red.izd-va; PROKOP'YEVA, L., tekhn.red.

[For efficient utilization of lumber resources; Central Russia] Ratsional'noe ispol'zovanie lesosechnogo fonda; po raionu TSentra. Moskva, Goslesbumizdat, 1958. 97 p. (MIRA 14:1)
(Lumbering)

L 62197-65 EWT(1)/EWT(m)/EWP(1)/T/EWP(t)/EWP(z)/EWP(b)/EWA(h) Pz-6/Pad/Peb
IJP(c) JD/HW/AT
ACCESSION NR: AP5015882 UR/0080/65/038/006/1300/1304
621.357.9

AUTHOR: Kochegarov, V. M., Samuylenkova, V. D., Semyachko, G. Ya.

TITLE: Electrodeposition of electric contacts on the surface of n- and p-type germanium

SOURCE: Zhurnal prikladnoy khimii, v. 38, no. 6, 1965, 1300-1304

TOPIC TAGS: electrodeposition, germanium surface, electric contact, semiconductor, fluoborate electrolyte

ABSTRACT: The results of a study of the electrodeposition of tin, lead, bismuth, thallium, copper, nickel, indium, and antimony on n- and p-type germanium single crystals are presented. The compositions of the baths and the conditions of electrolysis for preparing high-quality deposits were selected. The deposits were dense, bright, finely crystalline, and adhered well to the germanium surface. Particular attention was devoted to the treatment of the surfaces prior to deposition, since the purity of the semiconductor surface is an essential factor in the preparation of a high-quality metal deposit. Fluoborate baths were found to be the best electrolytes for the electrodeposition. The static current-voltage characteristic of the metal-semiconductor-contact junction, which reveals the degree of nonlinearity of this junction, was measured, and the type of contact obtained (rectifying or

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ohmic) was thus determined. In ohmic contacts, the slopes of the current-voltage characteristics were different, even though the metals were deposited under geometrically identical conditions; this indicates the presence of different transition resistances in the contact region, due to the presence of germanium oxides, which have not been completely removed. A high cathodic potential promotes the removal of these oxides and lowers the transition resistance; such a potential arises in electrolytes from which the metal is deposited with a high cathodic polarization (electrolytes containing fluoride ion). The data obtained in the study may be useful in the manufacture of solid-state circuits and in microminiaturization. Orig. art. has: 2 tables.

ASSOCIATION: None

SUBMITTED: 29Mar63 ENCL:00 SUB CODE: IC, EC

NO REF SOV: 009 OTHER: 013

Card 2/2

SEMYACHKO, R. Ya.

Cand Chem Sci - (diss) "Effect of group composition of high-molecular hydrocarbons of petroleum on the process of resin-formation during their liquid-phase oxidation." Minsk, 1961. 15 pp; (Division of Physics, Mathematics, Chemical and Geological Sciences of the Academy of Sciences Belorussian SSR); 200 copies; price not given; (KL, 5-61 sup, 177)

GORDASH, Yu.T.; SERGIYENKO, S.R.; SEMYACHKO, R.Ya.; REKUNOVA, E.A.

Chemical nature of the macromolecular hydrocarbon portion of Mukhanova petroleum. Dokl. AN BSSR 5 no.3:112-117 Mr '61. (MIRA 14:3)

1. Institut fiziko-organicheskoy khimii AN BSSR. Predstavleno adademikom AN BSSR B.V. Yerofeyevym.
(Mukhanova region—Petroleum—Analysis)

GORDASH, Yu.T.; LARYUTINA, E.A.; SEMYACHKO, R.Ya.

Sulfonation of aromatic hydrocarbons by the dioxane-sulfotrioxide complex. Dokl.AN BSSR 6 no.4:237-239 Ap '62. (MIRA 15:4)

1. Institut fiziko-organicheskoy khimii AN BSSR. Predstavleno akademikom AN BSSR B.V.Yerofeyevym.
(Hydrocarbons) (Sulfonation)

[illegible], P.Y., [illegible] R.[illegible]; B[illegible]SKAYA, R.I.; NIKULENKO, Ye.F. [illegible], A.F.; YEMEL'YANOV, A.P. [illegible], A.P.;

[illegible] of the products of cyclohexanol dehydrogenation studied by gas-liquid chromatography. Vestsi AN BSSR, Ser. [illegible] no.2:16-19 '65. (MIRA 18:12)

AZANOVSKAYA, M.M. [deceased]; YEMEL'YANOV, N.P.; SEMYACHKO, R. Ya.; KUDRYASHOVA, N.D.

Disproportionation of hydrogen in 1,3-cyclohexadiene under thermal dimerization. Dokl. AN BSSR 9 no. 11:729-732 N '65 (MIRA 19:1)

1. Institut fiziko-organicheskoy khimii AN BSSR.

SEMYAKIN, F.V.

Measurement of microphone set noises. Trudy LIKI no.7:31-37 '61.
(MIRA 18:3)

1. Kafedra akustiki Leningradskogo instituta kinoinzhenerov.

KHOKHLOV, [illegible]; SMIRNOV, E.V.

Equivalent circuits of nondirectional condenser microphones. Trudy LIKI no.10:3-16 '64.

Experimental study of nondirectional condenser microphones. Ibid.:17-26 (MIRA 18:9)

1. Kafedra akustiki Leningradskogo instituta kinoinzhenerov.

KHOKHLOV, A.D.; LITUS, S.S.; SEMYAKIN, F.V.; KORESHEV, G.P.

Condenser microphone with a high-stability form of the remotely controlled directivity characteristic. Trudy LIKI no.10:57-67 '64. (MIRA 18:9)

1. Kafedra akustiki Leningradskogo instituta kinoinzhenerov.

RUNG, E.Kh.; SEMYAKIN, G.N.; RASSADINA, S.A.

Machine for washing re-usable glass containers. Kons. i ov. prom. 16 no.6:16-18 Je '61. (MIRA 14:8)

1. Odesskiy konservnyy kombinat.
(Odessa--Canning industry--Equipment and supplies)
(Washing machines)

Semyakina, N. A.

PHASE I BOOK EXPLOITATION SOV/4973

Soveshchaniye po lyuminestsentsii, 8th, 1959

Metody lyuminestsentnogo analiza; materialy soveshchaniya (Methods for Luminescence Analysis; Materials of the 8th Conference) Minsk, Izd-vo AN BSSR, 1960. 147 p. 1,000 copies printed.

Sponsoring Agency: Akademiya nauk Belorusskoy SSR. Institut fiziki.

General Ed.: N. A. Borisevich; Ed.: L. Timofeyev; Tech. Ed.: N. Siderko.

PURPOSE: This collection of articles is intended for chemists and physicists interested in molecular luminescence, and for scientific personnel concerned with applications of this and related phenomena in research in the life sciences.

COVERAGE: The collection contains 28 papers read at the Eighth Conference on Luminescence, which took place 19-24 October, 1959 [place of conference not given]. These studies are concerned principally with the development of new luminescence methods for quantitative and qualitative chemical analysis, and with the applications of luminescence in medical and biological research. They discuss luminescence methods for the determination of uranium, mercury, magnesium, aluminum, boron, and other elements, as well as luminescence methods for the diagnosis of skin cancer and the detection of grippe virus, pathogenic microorganisms, etc. The structural design of new instruments for luminescence analysis is described. The conference was not concerned with studies on the phosphorescence of crystal phosphores. There is a discussion of the contributions of Soviet specialists in molecular luminescence in the course of the year and a half preceding the conference. The articles of V. K. Matveyev (p. 75) and of V. V. Patrikeyev (p. 79) have been annotated because of their importance. No personalities are mentioned. References accompany most of the articles.

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SERGIYENKO, S.R.; SEMYACHKO, R.Ya.; DAVYDOV, B.E.

Studying the composition and properties of high-molecular-weight hydrocarbons and tars of Gyurgyanskiy petroleum. Article No.13. Trudy Inst.nefti 12:65-75 '58. (MIRA 12:3)
(Hydrocarbons--Analysis)

SOV/80-32-3-31/43

5(3)

AUTHORS: Sergiyenko, S.R., Semyachko, R.Ya., Galich, P.N.

TITLE: The Liquid-Phase Oxidation of High-Molecular Hydrocarbons of Petroleum (Zhidkofaznoye okisleniye vysokomolekulyarnykh uglevodorodov nefti)

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol XXXII, Nr 3, pp 641-649 (USSR)

ABSTRACT: In high-molecular hydrocarbons of petroleum, compounds are contained which have condensated aromatic structures in their molecules. These compounds are the sources for the formation of resinous asphaltene substances. A genetic system exists in these hydrocarbons which may be represented by the following series: condensated bicyclic aromatic compounds → condensated polycyclic aromatic compounds → resins → asphaltenes. At an oxidation temperature of 150 - 175°C the asphaltenes prevail in the oxidation products. The paraffin-cycloparaffin hybrid compounds are transformed during oxidation in the liquid phase at a temperature of 150 - 175°C to peroxide compounds which in turn are transformed to acid saponifiable hydroxyl-containing oxygen compounds. The bicyclic aromatic condensated hydrocarbons con-

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The Liquid-Phase Oxidation of High-Molecular Hydrocarbons of Petroleum

densate most easily of all hydrocarbons, followed by the monocyclic aromatic compounds. The paraffin-cycloparaffin hydrocarbons oxidize more easily at 150°C than at 175°C.
There are 3 graphs, 3 tables, 1 diagram and 10 Soviet references.

SUBMITTED: May 16, 1957

5(2), 4(5)

AUTHOR: Semyachkova, A. F. SOV/64-59-2-18/23

TITLE: Spectroscopic Method for Determining the Degree of Wear of Industrial Gas Masks (Spektral'nyy metod opredeleniya stepeni otrabotki promyshlennykh protivogazov)

PERIODICAL: Khimicheskaya promyshlennost', 1959, Nr 2, pp 180-181 (USSR)

ABSTRACT: The method described is based on taking microsamples from different layers of the filtering material of the filter of gas masks and on a spectrum analysis of these samples. For this purpose 2 mm borings (at each layer) were made at the casing of the mask filter, and the sample was taken by a special "needle" (Fig 1) (or a medicinal needle I - 103). If the filtering material may be still used, the borings may be closed again hermetically. Difficult excitable elements are excited by means of an alternating current generator with spark generators of the PS-39 type (the DG-1 generator is unsuited for this purpose). The determination of metals may be made by means of usual alternating current generators. The analytical lines of some elements are mentioned (Table). Illustrations of two types of gas filter containers of BK-and BKF gas masks (Fig 2) with the corresponding explanations for taking the

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Spectroscopic Method for Determining the Degree of Wear of Industrial Gas Masks SOV/64-59-2-18/23

sample and evaluating the degree of wear of the filtering material are given. There are 2 figures, 1 table and 1 Soviet reference.

Card 2/2

KLAPCHUK, L.D., inzhener; NIKOLAYEV, M.S., inzhener; SEMYAGIN, F.G., inzhener; BRILEV, A.S., inzhener.

Switchboard sets of the "Elektroshchit" plant. Elek.sta. 24 no.5:56 My '53. (MLRA 6:7)
(Electric switchgear)

ACCESSION NR: AR5008058 S/0272/65/000/002/0087/0087

SOURCE: Ref. zh. Metrologiya i izmeritel'naya tekhnika. Otd. vyp., Abs. 2.32.695

AUTHOR: Khokhlov, A.D.; Litus, S.S.; Semyakin, F.V.; Koreshev, G.P.

TITLE: A capacitor microphone with a highly stable configuration of the remotely controlled directivity pattern

CITED SOURCE: Tr. Leningr. in-ta kinoinzhenerov, vyp. 10, 1964, 57-67

TOPIC TAGS: capacitor microphone, directivity pattern stability, button microphone

TRANSLATION: The article discusses a universal microphone design permitting one to obtain any given number of directivity pattern configurations. The transition from one pattern to another is accomplished in the low-impedance output circuits of the microphone. The 19A-9 button microphone was used as the sound receiver. Two identical "anode" follower cascades served as the amplifying unit. The transition from one directivity pattern configuration to another is instantaneous and the sensitivity of the capacitor microphone remains constant. Bibl. with 1 title; 8 illustrations.

SUB CODE: EC ENCL: 00

Card 1/1